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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thomas Fuehrer

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KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

SMITH, GARRETT A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/510,659	Applicant(s) FUEHRER ET AL.	
	Examiner Garrett Smith	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>29 October 2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is regarding Applicant's response filed 15 September 2008 to a prior Office Action. Claims 6 – 28 are pending. Claims 14 – 28 are new.
2. This Office Action is the **Third Action, Non-Final Rejection**.

Continued Examination under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed 15 September 2008 in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 September 2008 has been entered.

Information Disclosure Statement

4. The Examiner has considered the Information Disclosure Statement filed 29 October 2008. A copy of the annotated IDS is enclosed with this Office Action.

Response to Arguments

35 USC § 103(a)

5. Applicant's arguments (page 7 – 11), filed 15 September 2008, regarding the rejection under 35 USC § 103(a) of claims 6 – 13 have been fully considered but they are not persuasive.

With regard to applicant's argument that the Banister reference is teaching away from Devore reference, it is noted that according to MPEP 2123 II, "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments." Further, in MPEP 2141.02 VI, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed," which indicates that to show that a reference teaches away, there must be a showing that the reference criticizes, discredits, or otherwise discourages the solution claimed. MPEP 2145 D provides more information on teaching away. In summary, Applicant has not made a proper showing of teaching away at least in this instance, as no evidence has been shown that the solution claimed has been in any way criticized, discredited, or otherwise discouraged.

Further, the Examiner would also like to note that the second step ("padding the data") is a completely optional step because of the "in event of transmission of data including less binary information than a predetermined total number of segments" conditional does not have to happen. Thus all of the limitations associated with that step do not have to occur. Hence, the additional reference of Banister may be unnecessary for claim 6. Similarly, the "second arrangement" in claims 10 and 12 do not actually have to perform any functions as those functions are optional.

For arguments regarding claim 9, the claim lacks any patentable weight. The type of bus limits the preamble, the segments are not used within the body of the claim,

Art Unit: 2168

and “the data being transmitted in the corresponding time slots” is intended use because it does not specifically limit an active step of the method.

As for Applicant’s new claims 14 – 18, these claims do not change the scope of the parent claims. Claim 14 is intended use of the binary information as well as the issues raised with claim 9 above. Claim 15 – 17 are unclear in that the claims mandate a result (certain errors are prevented) but do not provide a methodology or procedure that particularly points out how to achieve these results. Claims 19 – 28 suffer from the same deficiencies as the claims 14 – 18.

For these reasons, the rejection under 35 USC § 103(a) of claims 6 – 13 is **maintained**.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims **15 – 18, 20 – 23 and 25 – 28** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. In regard to **claims 15, 17, 20, 22, 25 and 27**, the claims mandate a result (certain errors are prevented) but do not provide a methodology or procedure that particularly points out how to achieve these results. The Examiner cannot determine the scope of the claim because it is not clear how Applicant intends to achieve the error

Art Unit: 2168

reduction or prevention. Applicant does not particularly point out what Applicant regards as the invention in this case.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims **6 – 28** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. Claim **6** and its dependants fail the machine-or-transformation test which is a two-branched inquiry. It may be shown that a process claim satisfies 35 USC § 101 by showing that a claim is tied to a particular machine or by showing that a claim transforms an article into a different state or thing. See *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). As to the first prong (machine), the Examiner cannot find any showing that these claims are attached to a specific machine. As to the second prong (transformation), the process claims do not transform a physical article into a different state or thing. The process claims are merely manipulating abstract data without regard to any physical article or object.

12. Claims **10, 12** and their dependants are directed towards software, per se. The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at

Art Unit: 2168

best, functional descriptive material *per se*. Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994). Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 2168

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims **6 – 8, 10 – 13 and 14 – 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Devore et al. (US Patent 3821703, hereafter “Devore”) in view Banister et al. (US Patent 6567390, hereafter “Banister”). Devore and Banister are analogous art because they are from the same field of endeavor of data transmission.

15. In regard to **claim 6**, Devore teaches:

A method for padding segments for transmitting data on a bus system (see padding segment, in Abstract), the segments having a preset total number of binary information pieces (see predetermined number of data, in col. 2 lines 45-50), comprising: transmitting the data in the segments (see transferring signal data, in col. 2 lines 35-39); and in the event of transmission of data including less binary information than a predetermined total number of the segments, padding the total number of the segments by a filling pattern of a corresponding number of binary information pieces (see padding the segment to make a full segment, in col. 2 lines 55-63), wherein the filling pattern includes a number of binary information pieces that corresponds to the total number of the segments (see padding the bit sufficient enough to make a full segment which is the fixed number, in col. 2 lines 55-63). However, Devore does not

Art Unit: 2168

disclose that padding data are first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.

Banister discloses that padding data are first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data (see first initializing the frame with padding bits then overwriting with the actual data, in col. 7 lines 15-28). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the initialization of padding bits first, then overwriting with the actual data of Banister with Devore because it would help to enhance error control (see col. 2 lines 35-39 of Devore).

16. In regard to **claims 7, 11 and 13**, as set forth in claims 6, 10 and 12 respectively, Devore teaches that binary information pieces include bytes (see signal data are in bytes, in Abstract and col. 4 lines 55-67).

17. In regard to **claim 8**, as set forth in claim 6, Devore teaches the binary information of the filling pattern and the binary information of the data are written in a buffer memory into the segment, and the segment is transmitted from the buffer memory to the bus system (see data are processed in buffer system, in col. 2 lines 62-68 and col. 3 lines 1-2).

Art Unit: 2168

18. In regard to **claim 10**, a device for padding segments for transmitting data on a bus system (see padding segment, in Abstract), the segments having a predetermined total number of binary information pieces (see predetermined number of data, in col. 2 lines 45-50), comprising: a first arrangement for transmitting the data in the segments (see transferring signal data, in col. 2 lines 35-39); and a second arrangement for, in the event of transmission of data including less binary information than the predetermined total number of the segment, padding the total number of the segment through a filling pattern of a corresponding number of binary information pieces (see padding the segment to make a full segment, in col. 2 lines 55-63), wherein the second means first writes the filling pattern, whose number of binary information pieces corresponds to the total number of the Segment, into the segment (see padding the bit sufficient enough to make a full segment which is the fixed number, in col. 2 lines 55-63). However, Devore does not disclose that padding data are first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.

Banister discloses that padding data are first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data (see first initializing the frame with padding bits then overwriting with the actual data, in col. 7 lines 15-28). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the

Art Unit: 2168

initialization of padding bits first, then overwriting with the actual data of Banister with Devore because it would help to enhance error control (see col. 2 lines 35-39 of Devore).

19. In regard to **claim 12**, a bus system, comprising: a device for padding segments for transmitting data on the bus system (see padding segment, in Abstract), the segments having a predetermined total number of binary information pieces (see predetermined number of data, in col. 2 lines 45-50), the device including: a first arrangement for transmitting the data in the segments (see transferring signal data, in col. 2 lines 35-39); and a second arrangement for, in the event of transmission of data including less binary information than the predetermined total number of the segment, padding the data to the total number of the segment through a filling pattern of a corresponding number of binary information pieces (see padding the segment to make a full segment, in col. 2 lines 55-63), wherein the second means first writes the filling pattern, whose number of binary information pieces corresponds to the total number of the segment (see padding the bit sufficient enough to make a full segment which is the fixed number, in col. 2 lines 55-63). However, Devore does not disclose that padding data are first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.

Banister discloses that padding data are first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the

Art Unit: 2168

binary information of the data (see first initializing the frame with padding bits then overwriting with the actual data, in col. 7 lines 15-28). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the initialization of padding bits first, then overwriting with the actual data of Banister with Devore because it would help to enhance error control (see col. 2 lines 35-39 of Devore).

20. In regard to **claims 14 – 28**, the claims are rejected for the same reasons as their parent claims. See the discussion of the claims provided above.

21. Claim **9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Devore et al. (US Patent 3821703, hereafter “Devore”) in view Banister et al. (US Patent 6567390, hereafter “Banister”) as applied to claim 6 above, and further in view of Padovani et al. (US Patent Application 2003/0063583, hereafter “Padovani”). Devore, Banister and Padovani are analogous art because they are from the same field of endeavor of data transmission.

22. In regard to **claim 9**, Devore and Banister disclose padding segments for transmitting data in a bus system. However, does not disclose that the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots. Padovani discloses that the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots (see process the data packet over a time slot, in paragraph [0020]). It would have been

Art Unit: 2168

obvious to one having ordinary skill in the art at the time the invention was made to combine the time controlled bus system of Padovani with Devore and Banister because it would help to optimize the efficiency of data communication (see paragraph [009] of Padovani).

Conclusion

23. The Examiner requests, in response to this Office action, that support be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line no(s) in the specification and/or drawing figure(s). This will assist the Examiner in prosecuting the application.

24. When responding to this Office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Garrett Smith whose telephone number is (571)270-1764. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2168

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December 25, 2008

/GS/
Garrett Smith
Patent Examiner
Art Unit 2168

/Tim T. Vo/
Supervisory Patent Examiner, Art Unit 2168